DOCUMENT RESUME

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ABSTRACT

To combat the problem of registered apprentices being unable to receive federally mandated related training as a consequence of low class enrollment, an innovative program was developed for community colleges to provide such training for several different trades. The classroom training offers a core curriculum in ten major subject areas common to many trades and includes requirements such as safety, tools, math, blueprints, economics, etc. The program is administered by the apprenticeship coordinator who evaluates apprentices, facilitates their entry into adult education courses, sets up workshops to accomodate non-core requirements, and monitors program progress while coordinating the program's multimodal approach which includes correspondence and home study, telephone conference, traditional classes, and adapted classroom situations. Regular job site visits are conducted by the coordinator with employer and apprentice. A third-party evaluation concluded that all program goals were reached and that the program is extremely useful for handicapped and disadvantaged students. (Included in the report are the third-party evaluation and a report of the assistant cooperative work experience coordinator, which presents findings, identification of problem areas, and recommendations based on survey of supervisors and students in the carpenter, plumbing, plant electrician, inside electrician, and millright programs.) (CP)

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LANE

COMMUNITY

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LOW

ENROLLMENT

APPRENTICESHIP

PROGRAM

CE 021 927

U S DEPARTMENT OF HEALTH,
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State Department of Education
942 Lancaster Drive N.E.
Salem, Oregon 97310

Community Colleges
and Career Education

APPLICATION FOR APPROVAL OF
AN OCCUPATIONAL SUPPLEMENTARY COURSE*

(Please submit this form in duplicate prior to the date that the proposed course will be offered at your community college.)

INSTITUTION OR SCHOOL: Lane Community College DATE: June 12, 1978

COURSE TITLE: Apprenticeship Low Enrollment

COURSE NUMBER: 9.198 0999 COURSE CREDIT: none

☒ This is a new course.

☐ This is a revised course which replaces _____
Course Number

_____
Course Number

COURSE DESCRIPTION:

Training for registered and unregistered apprentices in those occupations requiring specialized instruction and job related experience by reason of low enrollment or other circumstances that may limit the apprentices' access to the training required under provisions of the apprenticeship law, ORS 660.

COURSE SCHEDULE:

Clock Hours	Per Week	Total per Term
Class		36
Laboratory (in-school)		
Laboratory (on-the-job)		60
Other (Specify) On job visits		12
TOTAL		108

This course meets the criteria for a vocational-technical course as approved by the State Department of Education.

Signed: Nile F Williamson
Local Administrator

* This form should be used only for courses which are designed to improve the individual's occupational skills and knowledge in order to achieve employment stability or advancement within their present occupation. Courses which are part of an occupational preparatory curriculum should be included on Form 4644 (5-74).

FOR STATE OFFICE USE:

This course has been declared eligible for state financial assistance. Approval will remain in effect until the course is revised, eliminated from the institution's offerings, or disqualified because it no longer meets approval citeria.

The local administrator's signature on this application certifies that the course meets (and will continue to meet) the criteria established by the State Department of Education for course and curriculum eligibility.

Recommended for Approval: LARRY MATHEWS — Occupational Specialist — 6/19/78 — Date

Approved: [signature] — State Director — 6/30/78 — Date

This course has not been approved for the following reasons:

_____ Occupational Specialist _____ Date

_____ State Director _____ Date

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APPRENTICESHIP (low enrollment)

Institution: Lane Community College
4000 East 30th Avenue
Eugene, OR 97405

Outlined developed by: LCC

Type of Program

The basic philosophy of this program centers around the principles that related training must be furnished to all registered apprentices. Programs with less than 12 apprentices have difficulty providing this training. Therefore this curriculum is designed to accumulate adequate numbers of registered apprentices. Specifically involved will be apprentices located in Lane County

Program Description

The complete course is designed for a maximum of four years, depending on the particular program in which the individual apprentice is registered. Enrollment will be quarterly.

The program will consist of:

- scheduled related training classes or seminars
- scheduled job site visits by the instructor with employer and apprentice
- maintaining basic required records for each apprentice
- maintaining records for annual review of entire program
- establish and maintain annual computer analysis for each registered apprentice

Accounting System to be Used

Primary instruction will be furnished in the common core areas as indicated in the prevailing apprenticeship standards. Additional instruction will related to the specific trades involved.

Who May Enroll

Any apprentice registered with the Oregon State Apprenticeship and Training Division whose particular trade does not average 12 registered individuals in Lane County per year may enroll.

Program Supervision

In addition to the established policies of Lane Community College, advisory supervision of this program will be maintained through an advisory committee from individuals within the college district who are knowledgeable of apprenticeship needs and who agree to voluntarily serve.

The committee will be asked to:

1. Approve selection of participating apprentices.
2. Approve objectives, content, procedures and progress of the program.
3. Meet regularly in an advisory capacity.

Tuition and Fees

Yearly tuition and fees will be due at time of enrollment. This amount will cover the cost of record forms. It will not cover the cost of additional text or reference books or materials recommended or desired during the course.

Program Objectives

Objectives of this program are for the accomplishment of the following:

1. Identify apprentice goals.
2. Establish a system of recordkeeping for the individual apprentice.
3. Furnish the respective apprenticeship committee with adequate information as may be requested to help ensure completion of their apprenticeship.
4. Provide the participating apprentice and employer with current regulations and information as may pertain to the program.
5. This program is not intended to replace current large enrollment apprenticeship programs, but to provide a currently non-existing service. It is to encourage the use of all available resources in accomplishing this goal.
6. If inclement weather or exterme distance of travel to the regularly scheduled classes should occur, then a correspondence course will be developed to accomodate this situation.

Job Site Visits by Instructor

Visits will be scheduled at least once a month. A calendar of monthly visits will be sent at the beginning of each month to indicate the time of the monthly visit. The purpose of the visit will relate to the application of current topics and individual needs.

Record Completion and Accuracy

The value of the apprenticeship records will only be as useful and reliable as the accuracy and completeness of the records themselves. Records which are not complete and reasonably accurate or which are abnormally distorted by unusual circumstances will not be included in the yearly analysis.

Evaluation Responsibility

To best serve the needs of the community the program must be flexible. Certain changes are inevitable. Periodic evaluation will be expected from the following, and related to:

1. Instructor - That the program is developed and administered according to specified requirements and that it serves the changing needs of participants and the apprenticeship community within the limits of time, resources and ability.

2. Advisory committee - That progress of the program, with regards to its objectives, is periodically evaluated in terms of selection progress and retention of participants.

3. Participants - That each participant will be asked at least annually to informally evaluate the program in terms of benefits realized and suggestions for improvement.

A Report on the Implementation of
LCC's Low Enrollment Apprenticeship Related Training Program

From Carl Horstrup, Apprenticeship Coordinator

OVERVIEW

The purpose of this report is to explain the origins, purposes, problems and solutions surrounding an innovative program to provide federally-mandated training for traditionally low enrollment apprenticeable trades. The program was implemented in the fall of 1978 through the Community Education Division at Lane Community College, and is currently in its second month of field operation.

Essentially, the program's aim is to offer related classroom training, as specified in Code 29.29 of the Code of Federal Regulations, to those apprenticeable trades which, either for shortage of enrollment or for geographic disbursement, have not had the funds or opportunity to participate. I conceived a plan for providing training, based on the number of common denominator classes which exist in all, or nearly all, the trades; that is, the plan would be to develop a core of curriculum areas which all trades would have in common.

To this end we first listed the areas of study we knew to exist under the "Related Training" heading of labor standards in all apprenticeable trades in the state. Researchers were dispatched to the Federal Building, BAT Office in Portland to determine the frequency which the requirements appeared for every trade registered in every office throughout the state. These findings were tallied and applied to the range of related training requirements to produce a ranking order. The ranking is listed below.

- Safety
- Materials
- Tools
- Equipment
- Math
- Blueprint and Layout
- Public Relations
- Related Trade Information
- Economics
- Codes
- Science
- Trade Terms
- Welding
- Labor/Management Information
- Electronics/Electricity
- History
- Communications
- Metallurgy
- Legislation

(A unit on first aid was added near the top of the list as being considered an essential element of safety.) From this list we sought to develop a curriculum based on the priority established by the respective apprenticeship committees.

After informing the local apprenticeship committees and the Eugene Office SATC field representatives, from whom we obtained a list of names and addresses of those apprentices currently registered in low enrollment trades (excepting those who attend related training classes through their place of employment or, if applicable, union), we notified those apprentices of their obligation under CFR 29.29 and of the opportunity, and invited them to a general meeting to discuss the program and to register.

Of the 80 invitations mailed, some 40 apprentices attended the meeting, were informed of the program's intent and units of study, and filled out personal information sheets and registration forms.

Given the fact that 22 trades were represented (see below) and that participating apprentices ranged from first period to final period status, flexibility was given top priority. We determined that since 59% of the apprentices had participated in some form of related training, either through short-lived trade programs or through college credit classes or other means, it was decided that credit would be given to any apprentice demonostrating above-average competency or proving by card, license, certificate, or college transcript, that he/she had successfully participated in required areas of study. Such a decision is made by the coordinator, after examining the apprentice's credentials and, in some cases, speaking with the employer.

In short, if an apprentice had developed skills in an area, he/she would not be required to attend the core class but could instead participate in a relevant adult education class.

The coordinator's role is to 1) meet with apprentices and employers on a routine basis to determine areas of weakness or interest, 2) hire competent instructors with proven expertise in each of the fields of core instruction, and 3) facilitate apprentices' entry into adult education courses which are either required or will benefit the apprentice and his/her trade. In addition, the apprenticeship coordinator, who is monitoring the program's progress, is actively setting up regular 30-hour adult education classes, as well as a series of shorter workshops, which more closely match many of the non-core requirements, e.g., labor relations, drafting, automatic transmission, welding, business-related classes, testing devices, tool quality, metallurgy, scaffolding, etc.

Trades Presently Represented

Pipefitter
Tilesetter
Bricklayer
Lather
Auto Mechanic
Heavy Duty Truck Mechanic
Cabinetmaker
Painter
Electronic Technician
Sign Hanger
Glazier
Fabricator
Auto Painter
Welding Equipment & Instrument Repair
Auto Glazier
Shoe Repairer
Country Printer
Office Machine Repairer
Meatcutter
Auto Body and Fender
Plasterer
Upholsterer

PROBLEMS

The glaring problem is, of course, how to provide relevant training to 40 different people with different skill levels in 22 different occupations. The solution we've employed is to offer the core curriculum units in a declining common denominator manner, i.e., the more trades which require a given subject, the higher will be the subject's priority in the class sequence. This enables the coordinator to monitor attendance, keep more effective records and chart the apprentice's progress as well as allowing the apprentice to be exposed to questions and problems of other related trades. If the instruction does not apply to a particular trade, the apprentice is placed in another class or participates in correspondence material.

Another problem has been that of developing criteria by which to measure the competency gained by apprentices during their class sessions, and, once measured, to apply it to a pass-fail guideline. In other words, how do apprentices prove they're paying attention to the material, and what options exist if they're not. Representatives from the Eugene Trades Apprenticeship and Training Committee, the Eugene Trowel Trades Apprenticeship and Training Committee (and business agents) are seeking to set up guidelines for testing procedures. Care must be taken in this endeavor due to the fact that some trades are union-affiliated and some are not.

The third general problem of concern is translating the general related training requirements to specific classes. Many requirements are vague, e.g., "related trade information", "others," "materials, tools and equipment." Since most of the trades specify these requirements for registered apprentices, creativity in translation, along with employer-apprentice advice and committee approval, must be stressed.

A fourth area of concern results from the fact that the core curriculum is still under development and does not and will not match either the breadth or the expertise of the material presented in class by instructors. It is difficult for those few who must participate by correspondence to ask questions of a piece of paper.

A final concern is determining the number of hours given to each unit of instruction to ensure adequate coverage, yet allow the latitude to offer the same units in subsequent years. A set rule has yet to be developed, but it will require input from all parties.

SUMMARY

The aim of the program, other than the stipulated goal of complying with federal law is to offer apprentices classes which will keep their interest, provide information relevant to their crafts, inspire concern for various aspects, and instill motivation.

I. Abstract of Project

The main purpose of this project was to develop for implementation a method with which to offer related training to registered apprentices who were working in trades which have very low enrollment. We evaluated the total requirements of apprenticeship related training in Oregon and produced a "core" curriculum. This curriculum is packaged under ten major subject headings, with the assumption that individual community colleges will alter them as necessary to align with their respective regulations. The approval of our Apprenticeship Low Enrollment Course by the Oregon State Department of Education has provided a uniform method to finance low enrollment apprenticeship coordinators.

II. Body of Final Report

A. Project Identification

1. The Development of Alternate Methods of Teaching Small Enrollment
2. 70-442
3. Lane Community College

B. Background

1. Several proposed methods for eliminating problems in the development of courses for low enrollment programs were evaluated. One such proposal, modeled after the current state approved Farm Business Management and Small Business Management Programs, was submitted to, and approved by, the State Department of Education. This new program has already been successfully implemented and is in the process of being on a trail operational basis.
2. Every set of apprenticeship standards currently registered in the state of Oregon were reviewed, regarding the listed obligations concerning the subjects under the related training section. From this review a list of prioritized course subjects was established. These subjects were then researched and class courses were developed.
3. The target group for these courses was intended to be registered apprentices exclusively. Recent state bureau of labor statistics indicate that one fifth of all registered apprentices do not receive related training, due to class low enrollment problems. This figure represents over 900 registered apprentices within Oregon that could be served by the new program.

C. Major Accomplishments and Outcomes

This project has produced a method with which respective community colleges may draw together those apprentices who have previously not registered for classes in order to provide them with classroom or related training. Other sections of the overall report deal with the implementation of our program. While community colleges participate in the related training portion of Oregon's apprenticeship program, the indenturing process, and its total adherence to anti-discriminatory practices rest solely with the appropriate state or federal agencies granted that responsibility.

D. Problems

The primary problems concerning the completion of this grant were twofold. First, the time element was extremely short, but it was known and accepted before the grant was ratified by the state department; the second problem concerned the establishment of a delivery system for an apprenticeship statewide resource library. While the abstract of our proposal definately lists this concern as a project goal, it was mutually decided to de-emphasize this issue. This decision was reached after examining the existing resource library at the state department and not wishing to duplicate service, although publications collected and owned by LCC have been, and will continue to be, available on a lending basis to any interested party in the statewide apprenticeship community. In the event that the State Department of Education would decide to locate its vocational library at a community college, LCC would be willing to accept the responsibility of its operation. LCC has the means to handle not only acquisition of materials, but also a delivery system for distribution throughout the state as prescribed in the proposal.

E. Evaluation

F. Conclusions and Summary

1. The major conclusion reached during this project was that joint and trade apprenticeship committees with small numbers of registered apprentices, have not been successful in establishing related training classes with their respective community colleges.

2. We are firmly convinced that our newly-developed low enrollment program will be able to eliminate this problem anywhere within the state. The program, like any new concept, should be carefully reviewed and discussed by both the respective apprenticeship committees and local community colleges before implementation, thereby clarifying their respective roles and the goals regarding furnishing related training to the apprentices themselves.

G. Recommendations

It would be our recommendation that when the new program is initiated in other areas within the state, careful examinations and explanation by both the respective committees and schools take place prior to the implementation of this program. It is our firm conviction that these discussions be between the aforementioned parties only. We found that other apprenticeship committees and their respective coordinators not directly involved with the low enrollment problem, were not necessarily in favor of state reimbursment being allocated to the low enrollment problem. Apparently, and this is personal speculation only, this particular response resulted from a fear of possible reduction of funds and services for their particular apprenticeship programs should our program be utilized and/or implemented in their area.

H. Project Follow-Up and Commitment

1. As LCC has successfully implemented this program and intends to continue its use, we will assuredly modify its content to provide current related training to the low enrollment trades in the best method possible.

2. LCC intends to request placement in following budgets, a position called low enrollment apprenticeship coordinator and appropriate clerical help. Although this position is anticipated to be funded within the school's regular budget, regular FTE reimbursment for the apprentices' attendance is necessary, as is the case with all other apprenticeable classes statewide.

BUDGET

TITLE OF PROJECT *The Development of Alternate Methods of Teaching Small Enrollment*

	TOTAL COSTS	LOCAL COSTS	FEDERAL COSTS
A. 1000 Instruction 100 Salaries			
200 Employee Benefits			
300 Travel			
Other Purchased Services . . .			
400 Supplies			
Instruction Subtotal			
B. 2210 Improvement of Instructional Services 100 Salaries	*13,485.33*	*4,532.00*	*8,953.33*
200 Employee .Benefits	*2,854.37*	*887.00*	*1,967.37*
300 Travel	*1,246.62*	--------	*1,246.62*
Other Purchased Services . .	*5,970.00*		*5,970.00*
400 Supplies	*1,056.19*	*675.00*	*381.19*
Improvement of Instructional Services Subtotal			
C. 2220 Educational Media Services 100 Salaries			
200 Employee Benefits			
300 Purchased Services			
400 Supplies			
Educational Media Services Subtotal			
D. 2500/2600 Support Services Business/ Central Indirect Cost @ *8* %	*1,481.49*	--------	*1,481.49*
Support Service Business and Central Subtotal			
E. Other (include explanation). . . .			
Other Subtotal			
Column Total	*13,906.00*	*6,094.00*	*20,000.00*

AN EVALUATION OF THE PROJECT: DEVELOPMENT OF METHODS TO TEACH APPRENTICESHIP SMALL ENROLLMENT CLASSES

submitted to the
Oregon Department of Education
942 Lancaster Drive NE
Salem, OR 97310

by
Sharon A. Wallace
and
Warren G. Wallace

October, 1978

Rationale

Apprenticeship has its roots in the earliest form of vocational education. But even after this expanse of time a multitude of problems still exist. This program intends to address one problem, the development of alternative methods of teaching small enrollment apprenticeship related training classes.

In this day of limited budgets, educators must strive to provide a variety of modal domains. Or simply stated, how can we serve more individuals in an economically feasible way? One method would be to develop a model deliverance system, a common system, capable of serving a larger population of students via a system providing basic training in a variety of cognitive learning styles. Thus, opening apprenticeship training programs for low enrollment areas becomes a reality within present funding.

Evaluation

This evaluation is intended to facilitate decision-making concerning the Oregon Department of Education Project: Development of Methods to Teach Apprenticeship Small Enrollment Classes. The evaluation utilizes the model developed by Stake (1967), a model proven as a useful mnemonic device for planning an evaluation study. This format will be incorporated with the evaluation portion of the Guidelines for Preparation of Final Reports for Special Projects, Oregon Department of Education. The Stake model recognizes the emphasis on explicating judgmental criteria as a part of formal evaluation studies as important. This model forces the evaluator, when making judgmental statements on educational programs, to describe the procedures used in arriving at the judgments (Worthen & Sanders, 1973).

The evaluation report findings will distinguish between antecedent, transaction, and outcome data. Any condition existing prior to program results which may relate to any outcome is an antecedent. Transactions are the countless interactions involving data, people, and things in education. They are primarily dynamic whereas antecedents and outcomes remain almost static. Outcomes include the areas of measurement, follow-up, impact studies, learning environments, and costs. Transaction actions are crux to the basic intent of this project A model must be developed to facilitate dynamic transactions.

Utilization of the Stake model is graphically displayed in Table 1. Information in each cell was gathered by discussion with Horstrup and Swanson. They provided background methodology and copies of resultant material.

Table 1

Layout of statements and data to be collected by the evaluator.

intents	observations		standards	judgments
1	4	Antecedents	7	10
2	5	Transactions	8	11
3	6	Outcomes	9	12
Description Matrix			Judgment Matrix	

Worthen & Sanders, 1973, p. 113.

Processing descriptive evaluation matrix data includes: finding the contingencies among antecedents, transactions, and outcomes; and establishing congruence between intents and observations (See Table 2). However, one must note congruence does not assure validity or reliability but only that that which was intended did occur (Worthen and Sanders, 1973). Reliability and validity are a contingency function built in from the beginning by staff and evaluators. The reliability error variance will change with evaluators but should be stable over time. Content validity was assured by item selection methodology.

Table 2

Processing of Descriptive Data

Intended Antecedents	⟵ Congruence ⟶	Observed Antecedents
Logical Contingency		Empirical Contingency
Intended Transactions	⟵ Congruence ⟶	Observed Transactions
Logical Contingency		Empirical Outcomes
Intended Outcomes	⟵ Congruence ⟶	Observed Outcomes

Worthen and Sanders, p. 118

Due to space availability and format, each cell is numbered and listed in context in cell format. To conserve space, items were not duplicated within a cell.

Cell 1

Intents - Antecedents

ERIC, AIM/ARM, Lockheed
State Apprenticeship Programs
Existing community college programs
Identification of common courses
Publisher's material
Center for Vocational Education, Ohio State University
Pacific Northwest Bell
Apprentice Committees
Vocational Learning Center, Oregon State University
Legal barriers
Political barriers
Fiscal barriers
Current bibliography of available training materials

Cell 2

Intents - Transactions

Review all existant material named in cell 1 and identify common training standards.
Develop a list of common courses
Develop training outcomes
Develop performance standards
Assign related training hours
Provide a bibliography
Develop a functional administrative program
Develop a model delivery system
Develop instructional program
Evaluation plan
Model phone delivery system
Involvement of trade construction
Model apprenticeship statewide resource library

Objective 14 was not included as Umpqua Community College preferred a private evaluator.

Cell 3

Intents - Outcomes

List of common requirements
Performance packets for each field
Resource library
Program development
Provide reference bibliographies
Established budgets
Administrative procedures
Apprentice committee involvement
Resource library at LCC
Current list of training bibliography

Cell 4

Observations - Antecedents

ERIC
AIM/ARM
State apprenticeship programs
Community college programs
Pacific Northwest Bell
Develop library
Identify barriers
Relate to national apprenticeship
Roles State Department of Education
Roles Oregon Bureau of Labor
Roles U.S. Bureau of Apprenticeship and Training
Coordinate purchasing
Existing bibliographies LCC

Cell 5

Observations - Transactions

Chart related training requirements
Develop set of training requirements
Assign hours for training
Bibliography
Budget
Funding Procedures
Apprentice committee involvement
Pacific Northwest Bell trial hook-up
Develop an instructional program
Timeline for library
Identify barriers
Library locations
Physical administration
Develop review committee
Bibliography of available training materials for all registered apprentice training programs

Cell 6

Observations - Outcomes

It would appear a satisfactory program for identification of methods to teach apprenticeship for small enrollment classes has been completed. Past research indicates this learning will be transfereable to other situations (Wallace, Horan, Baker and Hudson, 1975). Additional follow-up concerning use and success patterns would be extremely valuable.

Cell 7

Standards - Antecedents

State and Federal apprenticeship programs
AIM/ARM
ERIC
Apprenticeship committees
International Masonry apprenticeship
Identify existing state libraries
Identify State Department of Education
Identify Oregon Bureau of Labor
Identify U.S. Bureau of Apprenticeship and Training
Lane CC Library
Administration of LCC library

Cell 8

Standards - Transactions

Review ERIC
Review AIM/ARM
Review state apprenticeship programs
Review community college programs
Review common courses
Review apprentice/vocational publisher's exhibit
Review Center for Vocational Education, Ohio State University
Review Pacific Northwest Bell
Review apprentice committees
Review Vocational Learning Center, Oregon State University

Cell 9

Standards - Outcomes

Chart of related training requirements
List of courses standard to all occupations
Development of instructional program packets for training outcomes and performance indicators
Assignment of related training hours

Reference bilbiographies
Established budget
Registration procedures
Continuous apprentice committee involvement and approval
Provision of a telephone instructional system
Full functioning resource library of apprenticeship training materials
Current bibliographies available

Cell 10

Judgments - Antecedents

A review of the previous antecedents clearly displays a comprehensive coverage of current materials.

Cell 11

Judgments - Transactions

A chart of common related training was developed via a comprehensive search of current expert data.
Instructional packets including training outcomes and performance indicators for meeting standard training requirements were dispursed
An operational resource library was established
Hours were assigned to each individual standard training requirement
Full reference bibliographies are available at LCC
Full budget accounting available
Planning, timelines, suggested authors for instructional modules and selection of evaluator were performed by Horstrup and Swanson
Operational tested student registration system
Involvement of trade consultants and apprentice committee at all stages
Establishment of operational tested telephone conference system
Legal, political, and fiscal barriers were examined by Horstrup
Purchasing policies and procedures were satisfactory. Full records at LCC
Bibliographies are available for training materials for Oregon apprentice training except for union copyright material

Cell 12

Outcomes - Judgment

A review of cell 11 with respect to absolute standards as reflected by personal judgment of the evaluator indicates that the goals of this project were all successfully completed. This program was basically intended to be generative at the transaction stage and it has been.

Follow-up evaluation to determine use, effectiveness, and cost should be conducted over a period of time.

Significance of Accomplishments and Outcomes

As one reviews the Stake set of matrices it becomes apparent that the goals of the project were reached. The goals followed a logical methodology. Validity was built into the project from the initial phase. A comparison of the original proposal and the resultant products reveals all goals have been met.

Alternative methods of offering related apprenticeship training were developed: 1) correspondence and home study; 2) telephone conference; 3) traditional classroom; and 4) adapted classroom situations. These programs involve the educator with students through a multimodal approach, thus enabling students to better prepare for apprenticeship training in low enrollment classes. The program can be expanded to all apprenticeship areas.

Apprenticeship training has been a dilemma for many in education: teachers, counselors, and administrators. It was an area known only to participants and a few individuals in education. As a direct result of this program, apprenticeship training basic course requirements are available to all personnel, students, and the public. It is a program cognizant of public opinion and need.

This program is extremely useful for handicapped and disadvantaged students. It permits these individuals the opportunity to begin a career regardless of setting or architectural barriers. It provides a variety of ways to approach the subject thus permitting individuals a flexibility desperately needed. Each set of extreme personal problems requires unique understanding and flexibility traditional programs seldom offer.

All students may have the advantages of the results of this project. Material can be obtained by private schools, public institutions, or any other interested group or individual. Material was reviewed in an attempt to eliminate any sex bias or sex-role stereotyping.

Stake, R.D. The Countenance of Educational Evaluation, Teachers College Record, 1967, 68, 523-540.

Wallace, Horan, Baker and Hudson. Incremental Effects of Modeling and Performance Feedback in Teaching Decision-Making Counseling, Journal of Counseling Psychology, 1975, 23, 6, 570-572.

Worthen and Sanders. Educational Evaluation: Theory and Practice, Charles A. Jones Publishing Company, 1973.

SUMMARY REPORT FROM THE
ASSISTANT COOPERATIVE WORK EXPERIENCE COORDINATOR
FOR THE MONTHS OF MAY AND JUNE

This report will summarize the findings of the Assistant Cooperative Work Experience Coordinator based upon field and telephone interviews conducted with the apprentices and their supervisors in the various apprenticeship training programs in Douglas County. The report is divided into segments according to individual training program.

CARPENTER APPRENTICESHIP TRAINING PROGRAM

Generally, the supervisors seemed to be content with the training program, with but one exception--- the supervisors, in addition to the apprentices, wanted the school location returned to the Roseburg area. One supervisor said that many of the apprentices stayed overnight in Medford on Friday evening, rather than return to Roseburg and drive back to Medford the next morning for Saturday classes. He continued, "After partaking of Medford's evening entertainment, most of the apprentices are not physically or mentally prepared for Saturday classes."

Many apprentices suggested that the training program incorporate a "Working Classroom" rather than continuing with the book and classroom instruction. A "Working Classroom" is one in which the apprentices work on projects, such as building a house. When I passed this suggestion along to Mike Wooten, he replied that the program is not structured to undertake such a large-scale project since the classes meet only two days per month. He stated that the progress would be much too slow, and the large amount of money required for such and investment would not be delivering a "fair return."

The apprentices, however, have countered with another proposal, which involves working on smaller projects for individuals on a cost basis. These projects could be completed within a two day period and could include laying driveways, building decks, etc. .

Another apprentice recommendation is to visit various jobs during different phases of construction from beginning to completion. Many apprentices feel that such visits could be a valuable learning experience.

One last proposal, which I believe would be very difficult to incorporate, is to offer a less structured training program. One that assists in meeting the needs and goals of the individual apprentice. To maintain certain standards and develop a well-rounded journeyman, it is important that all apprentices be exposed to as many facets of the trade as is possible. It is also possible that the goals that they have chosen today may change further down the road, and without a broad exposure, they could be unprepared to undertake an alternative path.

Many apprentices complained about the vagueness of the categories delineated on the progress report. However, when quizzed as to how they might be improved, no one had any suggestions. One apprentice said that the progress reports were changed during his apprenticeship, and thereby, created new requirements which he had difficulty in meeting. He felt that, once an apprentice enters the program, the requirements should not be altered.

Some apprentices believe that too much emphasis was placed on classroom training. An apprentice who has just graduated to the journeyman ranks commented, "Ninety-nine percent of my knowledge was acquired on the job rather than in a classroom"

PLUMBING APPRENTICESHIP TRAINING PROGRAM

I have identified three potential problem areas as a result of my research.

(A) There is a need for more and better material. Apparently many apprentices lose interests in the classes as a result of the lack of applicable classroom material.

(B) Due to small class size, many beginning apprentices take the same class as their more experienced counterparts. Many of the experienced apprentices become bored as a result of the beginners' inability to fully comprehend the material without asking numerous questions.

(C) Again, due to the small class size, much of the classroom training is taken out of sequence. Therefore, there is a lack of congruency from one class to the next.

A fourth potential problem area may have been identified; however, the apprentices and supervisors appear to be split on the issue. Many have complained about the quality of instruction. Some have said that the instructor lacks concern and interest for the student and does not have adequate teaching skills. Several apprentices have related that as many as four apprentices attempted to transfer to the Eugene training program because of the inability of the local instructor. Another faction believe the instructor is interested and qualified but that he is not supplied with sufficient material to adequately instruct the class.

One apprentice says that the state should take the responsibility of providing the material for the instructor to teach; while another suggested a good programmed self-instruction curriculum as a better alternative than classroom lecture.

In regard to acquiring more pertinent materials, Ken Gum of Ken Gum Plumbing, recommended that factory representatives be invited to the classes to offer presentations on the latest innovative apparatus of the trade. Mr. Gum said that he could arrange such visits with the factory reprentatives if given three weeks advance notice.

Another supervisor mentioned the need for more welding in the curriculum and commented that Sandy Elam does an outstanding job as an instructor.

Many supervisors recommended that the instructor concentrate on useful, hard-to-understand material and touch lightly on the seldom-used or easy-to-understand material. "Too much time is spent on boiler systems, water plants, and gas lines" commented one supervisor, "and the apprentice has little opportunity to apply that knowledge in the Roseburg area."

Another supervisor suggested that the state return to the more difficult exams of yesteryear for issuing a journeyman's license, because "Too many guys are coming in from out of state and passing the current test to obtain journeyman status, while not possessing the required skills of a competent journeyman."

PLANT ELECTRICIAN TRAINING PROGRAM

The Cooperative Work Experience Coordinator may expect difficulty in obtaining complete cooperation with the supervisors of the apprentice plant electricians. As one supervisor stated, "We've had dealings with you people before. I wasn't impressed with your college then, and I'm not impressed with your college now. If I've got any ideas on how to improve apprenticeship training, I'll go to the council-not to you!"

Some supervisors, however, did make worthwhile contributions. Mentioned curriculum improvements included:

(A) Offer more courses to the apprentice in trigonometry, algebra, geometry, and physics theory. These classes should be scheduled on the same evening as the apprenticeship class. Possible instructors to obtain to teach the above courses are Harold Goddard and Rod Snow, both of Roseburg Lumber.

(B) Many supervisors want a good basic electronics program to be offered by the college.

(C) One supervisor feels that apprentices should be allowed access to the lavoratory areas at the college.

(D) Often sighted among curriculum improvements is the need to bring in more of a maintenance approach to the curriculum. In application, maintenance comprises the largest proportion of the Ipant electrician's work. Many supervisors believe that trouble-shooting is the name of the game.

(E) And one supervisor who has taught several apprenticeship classes at the college commented that there is not adequate equipment for teaching the classes nor is there a place to store the equipment that is available.

INSIDE ELECTRICIAN TRAINING PROGRAM

This particular trade may again present problems for the Cooperative Work Experience Coordinator in regard to a general lack of cooperation on the part of many of the supervisors; however, most of the apprentices were enthusiastic about our Coop Work Experience Program.

Tommy Kimbrell, a supervisor at Sim's Electric, would not give me any information on his apprenticees nor would he allow me to sign the apprentices to our program until he has contacted and received the "OK" from Mike Murphy and Ted Turner. That was two weeks ago. To date, he has not contacted either party.

The only suggestion from a supervisor for improvement of the training program was to move the Saturday apprenticeship meetings to evenings during the week in order for the apprentices to be free to work on Saturday.

The apprentices central complaint about the training program is that it does not offer a well-rounded on-the-job-training. An apprentice may be wiring houses for all four years and never receive any industrial experience or vice versa. Most apprentices would prefer a "Rotating Shop" where they work a period of time for a number of different contractors, which would give them broader applications exposure. The apprentices cautioned that the "Rotating Shop" might present problems because some shops are unionized while others are not. One apprentice noted that while the supervisors are aware of the apprentices desire for a "Rotating Shop" many of the supervisors remain entrenched against its use.

The apprentices appeared quite satisfied with the classroom instruction, although one apprentice suggested more emphasis should be placed on industrial electronics.

MILLRIGHT APPRENTICESHIP TRAINING PROGRAM

The millrights as recommended by supervisors and the apprentices, are very much in need of an additional or advanced hydraulics courses. Dub Hartley, a millright supervisor at Roseburg Lumber, has agreed to teach such a course. He would prefer to teach the course at the plant because Roseburg Lumber has all the equipment required to demonstrate the principles and trouble-shooting techniques that he will discuss. Mr. Hartley would like to open the class to approximately ten students, both apprenices and journeymen.

Vic Bridges' hydraulics course received numerous compliments from the apprentices; however, they would also like to receive instruction on stationary equipment, as well as, the mobile equipment.

The "TPC" course testing, according to one apprentice, should be offered during the summer. Another apprentice would like to have the "TPC" books supplemented with classroom lecture covering the books' material.

Many supervisors and apprentices desire that more welding courses be incorporated in the curriculum. They sited welding for tubing, both the inside and the outside of the tubes, as a technique that they need to learn.

One apprentice feels that a class offering instruction on various components would be valuable. He suggested that each apprentice actually apply the principles that he has learned by working with the component for a period of time and then transferring to the next component on a rotating basis.

Several apprentices recommended a course in pneumatics or advanced air components. Since this is a reasonably innovative field in relation to its new applications, it may draw students from both the apprentice and journeyman ranks. Such areas as this may be explored with seminars arranged by the college and presentations offered by factory representatives.

The Construction class received numerous complaints from the apprentices. They said, "It was great if you want to build a house, but I didn't learn anything that would help in the millright trade." Many suggested that the Construction class be replaced by a rigging and staging course. The Machine Shop Practices class and the math courses received several apprentice complaints because it was thought that they lacked value or were not applicable. In regard to math, the apprentices said that the required formulas were always available on charts or in books: and in most cases, that is what the engineers are paid to do.

In conclusion, there is a real need for improved instruction techniques in all the various apprenticeship training programs. Many of the instructors are very knowledgeable in their individual fields, however, they lack the teaching skills to adequately transfer their knowledge to the student. Mike Wooten agrees that this is one of the major problems in apprenticeship training.

After discussing this problem with Dean Moldenhauer, he suggested that we offer a two or three day seminar in teaching techniques in early September. He recommended that the seminar enrollment open to all interested individuals including the apprenticeship instructors.

APPRENTICESHIP
CO-OP WORK EXPERIENCE
PROGRAM DESCRIPTION

INTRODUCTION:

The apprenticeship law, ORS 660, requires community colleges to provide educational services in support of the apprenticeship program. Approximately 20 percent of the registered apprentices in Oregon are not receiving the required educational services for various reasons. This program is designed to meet the unmet training needs of this 20 percent of the apprenticeship population.

TYPE OF PROGRAM

It is the intent of this program to provide access to the trade knowledge, theory and maipulative skills in those apprenticeable occupations that are not now receiving the training specified in the apprenticeship standards. This program will not be available to occupations with twelve or more apprentices registered in the community college service area. It is expected that this training program will stimulate greater employer interest in apprenticeship which will increase the number of apprentices and thereby reduce the need for training in the low-enrollment areas.

PROGRAM DESCRIPTION

The complete course is designed for a maximum of four years, depending on the particular program in which the individual apprentice is registered. Enrollment will be quarterly.

The program will consist of:

- -scheduled related training classes or seminars
- -scheduled job site visits by the instructor with employer and apprentice
- -development of a training plan for each apprentice and the maintenance of individual training records as required by the apprenticeship law
- -maintenance of program records for audit control and evaluation purposes
- -establish and maintain annual computer analysis for each apprentice enrolled in the program
- -a maximum of forty (40) enrolled apprentices per instructor/coordinator

BASIC COURSE OF INSTRUCTION

General classroom instruction will be in those areas common to the occupations served by this training standards for each occupation will be the basis for the core curriculum. Specialized trade knowledge will be supplied on a consultant basis to those trades or occupations requiring this instructional services.

WHO MAY ENROLL

Any apprentice meeting federal requirements for vocational education service to apprenticeship whose particular occupation does not average 12 registered individuals.

PROGRAM SUPERVISION

The local Supervision of this program will be maintained through the local J.A.T.C. and the Coop work experience coordinator.

The committee will be asked to:

1. Review the selection of participating apprentices.

2. Approve objectives, content procedures and progress of the program.

PROGRAM OBJECTIVES

Objectives of this program are for the accomplishment of the following:

1. Provide educational services to the apprentices in the low-enrollment category who are not presently being served by the community college.

2. Provide for the coordination of education services with the on-the-job training experiences specified in the apprenticeship standards. For each occupation, this coordination required that the on-the-job training provide the necessary manipulative skills identified in the standards.

3. Establish a system of record keeping for each apprentice to insure that each apprentice completes the training program required by each apprentice committee.

4. Provide the participating apprentice and employer with current regulations and information relating to the training program.

5. This program is not intended to replace existing programs that have a suitable number of apprentices. This effort is designed to bring all available resources to bear on the problem of serving the low-enrollment occupations.

6. If inclement weather or extreme distance of travel to the regularly scheduled classes is a problem, then a correspondence course will be developed to handle this situation.

JOB SITE VISITS BY INSTRUCTOR

Visits will be scheduled at least once a month. A calendar of monthly visits will be send at the beginning of each month to indicate the time of the monthly visit. The purpose of the visit will relate to the application of current topics and individual needs. A written report will be sent to other local J.A.T.C. each month indicating problems and progress of the apprentice.

RECORD COMPLETION AND ACCURACY

The value of the apprenticeship records will only be as useful and reliable as the accuracy and completeness of the records themselves. Records which are not complete and reasonably accurate or which are abnormally distorted by unusual circumstances will not be included in the yearly analysis.

PROGRAM EVALUATION

The program must be flexible to serve the needs of the apprenticeship community. Changes must be expected. Evaluation will be made on a scheduled basis involving the following:

1. General - The program will be reviewed completely after two terms of field operation by the Department of Education in cooperation with others involved with the program. The purpose of this evaluation is to determine if major changes are required in the program before the end of the first year of operation.

2. Instructor - That the program is developed and administered according to specified requirements and that it serves the changing needs of participants and the apprentiecship community within the limits of time, resources and ability.

3. Joint Apprenticeship Training Committee - That progress of the program, with regards to its objectives, is periodically evaluated in terms of selection progress and retention of participants.

4. Participants - That each participant will be asked at least anually to informally evaluate the program in terms of benefits realized and suggestions for improvement.

TUITION AND FEES

Tuition and fees will be due at time of enrollment. This amount will cover the cost of record forms and administrative cost. It will cover the cost of additional text or reference books or materials recommended or desired during the course.

STEPS TOWARD SETTING UP LOW ENROLLMENT
CO-OP WORK EXPERIENCE PROGRAM FOR APPRENTICES

1. Get approval of local J.A.T.C. committees concerned.

2. Contact each employer and supervisor of apprentice involved and explain why a co-op work experience program is important in this situation.

3. Contact each apprentice and explain the program.

4. Written report sent to J.A.T.C. each month.

REASONS:

1. Often the apprentice and employer do not know what paper-work is expected to be completed.

2. No schooling is being provided, because of low-enrollment members in the area.

3. Communications between employer and school is too slow (problems can be dealt with effectively each month). A written report sent to J.A.T.C. for each meeting.

4. Apprentice has work problems or school problems special assistance can be prescribed immediately. (With in a month). Often apprentices flounder 2-3 months before they get the answers they need.

5. The school does not want to be a threat to the employer. Contact apprentice on his time (Noon hours or after work). School is not taking away from the program but adding to it.

6. Apprenticeship is an Occupational Preparatory Program and qualifies for co-op work experience. (114 hours)

7. Low-enrollment Apprenticeship programs often do not have the quality progress needed to produce a qualified Journeyman. (Closer contact with employers and school officials will provide the necessary communication to excuse this happens).

IT IS PROPOSED THAT:

8. 440 hours per apprentice per year would be approved for low enrollment areas. This would provide enough F.T.E. $ to insure that the apprentice will get the proper training and supervision to satisfactorily complete their apprenticeship program.